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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,825	01/09/2001	Kaoru Sugita	2204-002205	6832

7590 06/25/2003

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EXAMINER	
TRAN, LEN	
ART UNIT	PAPER NUMBER

1725

DATE MAILED: 06/25/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/756,825

Applicant(s)

SUGITA ET AL.

Examiner

Len Tran

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-20 is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 4-294855 in view of Applicant's admitted prior art (page 1, third paragraph), and further in view of FR 1.243.333.

JP '855 discloses the method for manufacturing an aluminum cast product enclosing a pipe inserted therein, comprising the steps of arranging a pipe in the cavity of a mold, and

Art Unit: 1725

securing the pipe within the mold cavity and then pouring molten metal into the cavity so as to enclose the pipe with aluminum alloy (abstract and figures).

JP '855 fails to disclose the following: the controlling member has a tip inserted to the opening of the pipe, wherein is stepped at a middle part of the tip to allow axial movement and not radial dislocation, coupling a bracket having a hole to a pipe, the surface layer of the control member is selected from group consisting of Ti, TiN, TiC, CrN, and BN, and that the compressed gas is an inert gas flowing in the pipe.

However, FR 333 discloses *a control member having an insert is stepped at a middle part toward the tip for the purpose of securing the tube in place while under casting (page 2 and figure 4) without radial dislocation.*

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide an insert as taught by FR '333, in JP '855 in order to secure the tube while casting without radial dislocation.

In addition, FR '333 *lacks the teaching of allowing axial movement without radial dislocation.* However, such argument does not render the reference to be unobvious, since the purpose of applicant's invention is to *clamp the tube* and not allowing radial dislocation. The tube is clamped by the controlling member as disclosed in page 6, 2<sup>nd</sup> paragraph, in applicant's specification, allowing a rigid hold in order for molten metal not to move the tube during pouring, since that would displace the desired final positioning of the tube. Therefore, allowing

Art Unit: 1725

an axial movement to the tube is not expressly taught in applicant's claims. Thus, FR '333 discloses the claimed invention as claimed.

FR '333 teaches having an insertion pin for securing the tube, but does not teach coupling a bracket between the pin and pipe. However, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide a bracket, since the bracket would only add extra securing strength between the pin and the tube.

In addition, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide surface layer being either Ti, TiN, TiC, CrN, or BN, since any of these metals are at a higher melting point than aluminum, whereby preventing the surface from melting.

Applicant's admitted prior art disclose using compressed gas for the purpose to inhibit melt down and to improve its adhesiveness to the enclosing material, but do not mention of an inert gas. However, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to use inert gas, since the use of inert gas would prevent inclusion of oxides. Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to use either compressed gas or inert gas as taught by applicant's admitted prior art, page 1, in JP '855 in order to inhibit melt down and to improve its adhesiveness to the enclosing material.

***Allowable Subject Matter***

4. Claims 19 and 20 are allowed.

The prior arts of record do not teach holding a portion of the pipe in the cavity by receiving the portion of the pipe in the groove of a core member, a portion of the core received within the cavity.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Len Tran whose telephone number is (703)605-1175. The examiner can normally be reached on M-F, 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3602 for regular communications and (703)305-3602 for After Final communications.

Art Unit: 1725

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Len Tran  
Examiner  
Art Unit 1725

LT  
June 18, 2003

*[Handwritten signature]*  
6/18/03